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STANZIONE & KIM, LLP
919 18TH STREET, N.W.
SUITE 440
WASHINGTON, DC 20006

EXAMINER
SALOMON, PHENUEL S

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/822,847
Filing Date: April 13, 2004
Appellant(s):

Kevin T. Roddy
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/13/09 appealing from the Office action mailed

02/03/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings

which will directly affect or be directly affected by or have a bearing on the Board's decision in

the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in

the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 5,973,664	Badger	10-1999
US 6,757,034	Yu	06-2004
US 6,346,972	Kim	02-2002
US 6,744,259	Bald	06-2004

US 6,356,287   Ruberry et al.   03-2002

NEC Technologies, MultiSync LCD 1510+ User's Manual   08-1999

Portrait Displays, Pivot Pro Software   copyright 1998-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill
> in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

11.   Claims 1, 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US

6,757,034) in view of Badger (US 5,973,664) and in further view of (NEC LCD Series MultiSync

User's Manual 8/22/1999 hereinafter NEC).

Claim 1: Yu discloses a method of indicating functions of buttons in an image display apparatus, the

method comprising:

generating an image indicating functions assigned to the buttons (fig. 3, items 101-102); and

displaying the image on the image display apparatus, wherein the image is displayed at a position

on the image display apparatus close to the buttons (fig. 3, items 302), and wherein the displaying of the

image on the image display apparatus further comprises: but does not explicitly disclose

detecting a pivot angle of the image display apparatus, and

displaying the image rotated according to the pivot angle at a position close to the buttons.

However, Badger discloses a sensor, which determines the current physical orientation and signal the

operating system to change the orientation mode to compensate for the rotation (col. 5, lines 26-31).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include pivot angle detection in Yu. One would have been motivated to do so in order to

accommodate the user with different orientation modes. But do not disclose displaying the image rotated

according to the pivot angle at a position close to the buttons. However, NEC discloses the right

orientation of the OSM menu can be toggled between landscape and portrait (p. 6, para. 3) [the menu will

be displayed according to the button position]. Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to include rotating image in Yu. One would

have been motivated to do so in order to accommodate the user with different orientation modes and

providing the right image display for each alternative mode.

Claim 65: Yu, Badger and NEC disclose the method of claim 1 above, Yu further discloses wherein at

least one of the image and an OSD menu having selectable items to adjust display parameters of the

image display apparatus is displayed, when any one of the buttons is pushed (fig. 4).

Claim 66: Yu, Badger and NEC disclose the method of claim 1 above, NEC further discloses wherein the

buttons are disposed on a front frame of the display apparatus (fig. R-1). One would have been motivated

to do so in order to accommodate user with functions selection.

12.   Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (US 6,757,034) in view of Badger (US 5,973,664) in view of (NEC LCD Series MultiSync User's Manual 8/22/1999 hereinafter NEC) and in further view of Bald (US 6,744,259 B2).

Claim 2: Yu NEC and Badger disclose a method as in claim 1 above, Yu further discloses the image but does not explicitly disclose text indicating the functions assigned to the buttons. However Bald discloses image with text indicating the functions (fig. 1, item 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include text indicating functions in Yu. One would have been motivated to do so in order to accommodate the user with both image and text description of the function.

Claim 3: Yu NEC, Badger and Bald disclose the method as in claim 2 above, Bald further discloses the language of the text can be selected by a user (col. 5, lines 36-44), [language could have been one of the options, since it is a technical equipment which can be used worldwide]. One would have been motivated to do so in order to accommodate the user in term of universality of the apparatus.

Claim 4: Yu NEC, Badger and Bald disclose a method as in claim 2 above, Yu further discloses the image also includes symbols indicating at least one function assigned to at least one respective button (fig. 3, item 302).

13.   Claims 7, 9 and 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 6,346,972 B1) in view of Bald (US 6,744,259 B2) and further in view of (NEC LCD Series MultiSync User's Manual 8/22/1999 hereinafter NEC).

Claim 7: Kim discloses an image display apparatus comprising:

an image display unit (fig. 1);

a graphics processing unit (panel driver) which supplies images displayed by the image display unit (fig. 3, item 900),

a pivot detector which detects a pivot angle of the image display apparatus and supplies pivot angle data to the graphics processing unit (fig. 3, item 800);

the graphics processing unit displays the image rotated according to the pivot angle (fig. 10), but does not explicitly disclose:

at apposition close to the buttons;

a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons; and

wherein:

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit.

the zones to display an image, indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons, and

However, Bald discloses

a controller which sets display parameters of the image display apparatus, has buttons for item selection, and performs operations assigned to the buttons (*display screen controller that checks parameters associated with softkeys and displays functions assigned to the keys*) (col. 5, lines 46-62),

the image display unit has zones to display an image indicating functions assigned to the buttons, and the controller generates image information to be displayed in the zones and supplies the image information to the graphics processing unit and (fig. 1, items 1-4), (col. 5, lines 36-44)

the zones to display an image, indicating functions assigned the buttons are displayed at a position on the image display apparatus close to the buttons (fig. 1, items 1-4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have included Bald's features in Kim. One would have been motivated to do so in order to accommodate the user with a wide variety of menu selections and providing the right image display for each alternative mode.

However, NEC discloses the right orientation of the OSM menu can be toggled between landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include rotating image in Kim. One would have been motivated to do so in order to accommodate the user with different orientation modes and providing the right image display for each alternative mode.

Claim 9: Kim Bald and NEC disclose the apparatus as in claim 7 above, Bald further discloses the image indicating functions assigned the buttons is text indicating the functions assigned to the buttons (fig. 1, items 1-4). One would have been motivated to do so in order to accommodate the user with both image and text description of the function.

Claim 67: Kim Bald and NEC disclose method of claim 7 above, Kim further discloses wherein at least one of the image and an OSD menu having selectable items to adjust the display parameters of the image display apparatus is displayed, when any one of the buttons is pushed (col. 3, lines 25-30).

Claim 68: Kim Bald and NEC disclose method of claim 7 above, Kim further discloses wherein the

buttons are disposed on a front frame of the display apparatus (fig. 1).

14.   Claims 19-23, and 69-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bald

(US 6,744,259) in view of Kim (US 6,346,972 B1) and further in view of (NEC LCD Series MultiSync

User's Manual 8/22/1999 hereinafter NEC).

Claim 19: Bald discloses an image display apparatus having buttons to select items of a display,

comprising:

        an image display unit including zones to display an image indicating functions assigned to the

buttons; (fig. 1, items 1-4)

      a controller to set display parameters of the image display apparatus, to perform operations

assigned to the buttons (col. 5, lines 46-62), to generate image information to be displayed in the zones

(fig. 1, items 1-4) and to supply the image information to the graphics processing unit, (col. 5, lines 36-

44), but does not explicitly disclose:

      a graphics processing unit to supply images displayed by the image display unit;

      a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle

detected to the graphics processing unit such that the graphics processing unit supplies an image to the

image display unit at a same pivot angle as the image display unit

However, Kim discloses

        a graphics processing unit to supply images displayed by the image display unit (fig. 3);

      a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle

detected to the graphics processing unit such that the graphics processing unit supplies an image to the

image display unit at a same pivot angle as the image display unit (col. 5, lines 8-11 and fig. 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include graphics processing in Bald. One would have been motivated to do so in order to speed

up the display process and provide the user with the right image display for each alternative mode. But do

not disclose

wherein the image display unit displays the image in the zones rotated according to the pivot

angle at a position close to the buttons

However, NEC discloses the right orientation of the OSM menu can be toggled between

landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include rotating image in Kim. One would have been motivated to do so in order to

accommodate the user with different orientation modes and providing the right image display for each

alternative mode.

Claim 20: Bald Kim and NEC disclose the image display apparatus as in claim 19 above, Bald further

discloses the zones are in a close corresponding relationship with the respective button (fig. 3, item 3).

Claim 21: Bald Kim and NEC disclose the image display apparatus as in claim 19 above, Bald further

discloses the functions can be displayed in several different languages (*use of a scrolling display permits*

selection from among a greater number of options than there are softkeys) (col. 5, lines 36-44) [language

could have been one of the options, since it is a technical equipment which can be used worldwide].

Claim 22: Bald Kim and NEC disclose the image display apparatus as in claim 19 above, Bald further

discloses comprising:

a button discrimination unit the discriminate which button is pushed (col. 5, lines 46-50)

Claim 23: Bald Kim and NEC disclose the image display apparatus as in claim 19 above, Bald further

discloses the image is displayed when any one of the buttons is pushed (col. 5, lines 51-62).

Claim 69: Bald Kim and NEC disclose the method of claim 19, Kim further discloses wherein at least one

of the image and an OSD menu having selectable items to adjust the display parameters of the image

display apparatus is displayed, when any one of the buttons is pushed (col. 3, lines 25-30).

Claim 70: Bald Kim and NEC disclose the method of claim 19 above, Bald further discloses wherein the

buttons are disposed on a front frame of the display apparatus (fig. 1).

15.   Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bald (US 6,744,259)

in view of Kim (US 6,346,972 B1) in view of (NEC LCD Series MultiSync User's Manual 8/22/1999

hereinafter NEC) and in further view of Ruberry et al.(US 6,356,287 B1).

Claim 24: Bald Kim and NEC disclose the image display apparatus as in claim 19 above, but do not

explicitly disclose a second set of buttons, wherein when the image display unit is pivoted, the zones

become in close corresponding relationship with the second set of buttons. However, Ruberry discloses a

new orientation setting where the device repaints the displayed text using the new orientation (col. 12,

lines 37-51). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to include this feature in Bald. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position.

16.   Claims 27-29, 31-34 and 71-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bald et al. (US 6,744,259) in view of Yu (US 6,757,034 B2).

Claim 27: Bald discloses a method of indicating functions of buttons in an image display apparatus having a screen and a frame with the buttons, the method comprising:

generating one of first functions of a first button and one of second functions of a second button to be displayed on the screen (*at power up the system displays menu where a plurality of functions can be selected*) (col. 5, lines 36-42);

wherein the generating the one of the first functions comprises simultaneously generating each set of the first and second functions according to activation (*scrolling*) of one of the first and second buttons (*use of a scrolling display permits selection from among a greater number of options than they are softkeys*) (col. 5, lines 43-45); but does not explicitly disclose

generating sub-functions of at least one of the first and second buttons according to the generated first and second function. However, Yu discloses a OSD software to display menu functions and sub functions respective to indicative symbols and buttons (fig. 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include Yu sub-functions feature in Bald. One would have been motivated to do so in order to optimize screen real estate.

Claim 28: Bald and Yu disclose the method as in claim 27 above, Bald further discloses each of the first functions and the second functions comprises one or more characters (as shown in fig. 3), and the generating of the first functions comprises displaying the characters in a direction in which the first and

second buttons are arranged on the frame (*menu displays cursor control activated by softkeys 1 and 2 and select keys by softkey 3 and exit by softkey 4*) (col. 5, lines 36-44).

Claim 29: Bald and Yu disclose discloses the method as in claim 27 above, Bald further discloses each of the first functions and the second functions comprises one or more characters (as shown in fig. 3), and the generating of the one of the first functions comprises displaying the characters in a direction having an angle (the keys and related functions form a zero degree angle) with an arrangement of the first and second buttons (*menu displays cursor control activated by softkeys 1 and 2 and select keys by softkey 3 and exit by softkey 4*) (col. 5, lines 36-44).

Claim 31: Bald and Yu disclose the method as in claim 27 above, Bald further discloses the generating of the one of the first functions comprises displaying the one of the first functions and the one of the second functions on corresponding zones of the screen (fig. 3) and (col. 5, lines 36-44).

Claim 32: Bald and Yu disclose the method as in claim 27 above, Bald further discloses comprising: changing one of the first functions to another function corresponding to the first button to be displayed on the screen (*the menu permits user to select among four types of test function*) (col. 5, lines 42-44).

Claim 33: Bald and Yu disclose the method as in claim 27 above, Bald further discloses at least one of the first functions and the second functions is programmable (col. 4, lines 27-33).

Claim 34: Bald and Yu disclose the method as in claim 27 above, Bald further discloses the first functions and the second functions comprises at least one of menu, select, +, -, symbols. Arrow-up bold. or , a format of a signal source, and one of languages (fig. 1, items 1-4).

Claim 71: Bald and Yu disclose the method of claim 27 above, Bald further discloses wherein the

generating of the one of the first functions comprises displaying the one of the first functions and the one

of the second functions on corresponding zones of the screen, when any one of the buttons is pushed (col.

5, lines 36-44).

Claim 72: Bald and Yu disclose the method of claim 27, Bald further discloses wherein the buttons are

disposed on a front side of the frame (fig. 1).

17.   Claims 35-36 and 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bald

(US 6,744,259) in view of Yu (US 6,757,034 B2) in view of Kim (US 6,346,972 B1) and further in view

of (NEC LCD Series MultiSync User's Manual 8/22/1999 hereinafter NEC).

Claim 35: Bald discloses an image display apparatus having a screen and a frame with at least one button,

comprising:

a controller to set display parameters of the image display apparatus, to perform operations

assigned to the buttons (col. 5, lines 46-62), to generate image information to be displayed in the zones

(fig. 1, items 1-4) and to supply the image information to the graphics processing unit, (col. 5, lines 36-

44), but does not explicitly disclose:

a graphics processing unit to process at least one function of the respective at least one button to

be displayed on the screen at a position corresponding to the at least one button:

a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle

detected to the graphics processing unit such that the graphics processing unit supplies an image to the

image display unit at a same pivot angle as the image display unit

However, Yu discloses

a graphics processing unit to process at least one function of the respective at least one button

to be displayed on the screen at a position corresponding to the at least one button (fig. 3). Therefore, it

would have been obvious to one having ordinary skill in the art at the time the invention was made to

include graphics processing in Bald. One would have been motivated to do so in order to speed up the

display process and provide the user with the right image display function at the right position.

However, Kim discloses:

a pivot detector to detect a pivot angle of the image display unit and to provide the pivot angle

detected to the graphics processing unit such that the graphics processing unit supplies an image to the

image display unit at a same pivot angle as the image display unit (col. 5, lines 8-11 and fig. 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include graphics processing in Bald. One would have been motivated to do so in order to speed

up the display process and provide the user with the right image display for each alternative mode. But do

not explicitly disclose

wherein the image display unit displays the image in the zones rotated according to the pivot

angle at a position close to the buttons

However, NEC discloses the right orientation of the OSM menu can be toggled between

landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include rotating image in Bald. One would have been motivated to do so in order to

accommodate the user with different orientation modes and providing the right image display for each

alternative mode.

Claim 36: Bald Kim Yu and NEC discloses the image display apparatus as in claim 35 above, Yu further

discloses the at least one function of the respective at least one button comprises first and second sub-

functions, and the generating of the first and second sub-functions comprises selectively generating one of

first and second sub-functions according to activation of the respective button (*an OSD software to*

display menu functions and sub functions respective to indicative symbols and buttons) (fig. 3). One

would have been motivated to do so in order to optimize screen real estate.

Claim 73: Bald Kim Yu and NEC discloses the method of claim 35 above, Yu further discloses wherein

at least one of the image and an OSD menu having selectable items to adjust the display parameters of the

screen is displayed, when at least one button is pushed (fig. 4).

Claim 74: Bald Kim Yu and NEC discloses the method of claim 35, Bald further discloses wherein the at

least one button is disposed on a front frame of the display apparatus (fig. 1).

18.   Claims 37-63 and 75-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu

(US 6,757,034 B2) in view of Pivot Pro Software (copyright 1998-2001) (hereinafter **Pivot Pro**) in view

of Kim (US 6,346,972 B1) and further in view of (NEC LCD Series MultiSync User's Manual 8/22/1999

hereinafter **NEC**).

Claim 37: Yu discloses a device for displaying an image, comprising:

       a screen (fig. 3);

       a housing having an opening and an outer border surface substantially surrounding the opening,

wherein the screen is positioned inside the housing so as to be viewable through the opening (fig. 3);

at least one input unit being positioned on the housing, wherein the actuation of the at least one

input unit allows controlling of a function of the display device (fig. 3, item 102); but does not explicitly

disclose

a detector unit to detect whether the device is in a portrait mode or in a landscape mode,

wherein at least one symbol is displayed which is respectively assigned to the at least one input

unit, and wherein the orientation of the at least one symbol is changed in accordance with the result of the

detector unit.

However, Pivot Pro discloses:

a detector unit to detect whether the device is in a portrait mode or in a landscape mode (p. 1,

para. [001]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to include detector unit in Yu. One would have been motivated to do so in order to

help the user by taking advantage of all the buttons functionality even in a rotated position.

However, Kim discloses:

wherein at least one symbol is displayed which is respectively assigned to the at least one input

unit, and wherein the orientation of the at least one symbol is changed in accordance with the result of the

detector unit (col. 7, lines 51-55) and (fig. 10). Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to include Kim feature in Yu. One would have

been motivated to do so in order to help the user by taking advantage of all the buttons functionality even

in a rotated position.

But do not explicitly disclose the at least one symbol, whose orientation is changed, is displayed

at a position close to the at least one input unit.

However, NEC discloses the right orientation of the OSM menu can be toggled between

landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was

made to include rotating image in Yu. One would have been motivated to do so in order to accommodate

the user with different orientation modes and providing the right image display for each alternative mode.

Claim 38: Yu Pivot Pro Kim and NEC disclose the device according to claim 37 above, Kim further

discloses the detector unit detects the portrait mode or the landscape mode in response to a user rotating

the screen (fig. 10).

Claim 39: Yu Pivot Pro Kim and NEC disclose the device according to claim 37 above, Yu further

discloses the at least one symbol comprises at least one icon or text indicating a function of the display

device (fig. 3).

Claim 40: Yu Pivot Pro Kim and NEC disclose the device according to claim 39 above, Yu further

discloses the at least one symbol is configured to be displayed on the screen in a location that establishes

a visually corresponding relationship between the at least one symbol and the at least one input unit (col.

3, lines 18-21).

Claim 41: Yu Pivot Pro Kim and NEC disclose the device according to claim 40 above, Yu further

discloses the function includes a function to control display parameters of the display device (col. 3, lines

48-50).

Claim 42: Yu Pivot Pro Kim and NEC disclose the device according to claim 37 above, Yu further

discloses, wherein the function includes a function to control display parameters of the display device

(fig. 4, items 103 & 301).

Claim 43: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the device according to claim 37 above, <u>Kim</u> further

discloses the at least one input unit further comprises at least one of group comprising a set of

horizontally arranged input keys (fig. 1) and <u>Yu</u> further discloses a set of vertically arranged input keys

(fig. 3). One would have been motivated to do so in order to better manage the screen real estate.

Claim 44: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the device according to claim 37 above, <u>Kim</u> further

discloses the at least one symbol is configured to be displayed horizontally and in an upright direction to

indicate a respective position and function of the at least one input unit regardless of the portrait or the

landscape mode of the display device (fig. 10). One would have been motivated to do so in order to make

it easier for the user to adjust the display parameter.

Claim 45: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the device according to claim 37 above, <u>Yu</u> further

discloses the at least one symbol further comprises an OSD menu having selectable items to adjust the

display parameters of the screen, and wherein the OSD menu is configured to be displayed distant from

the at least one image (col. 2, lines 11-18).

Claim 46: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the device according to claim 37 above, <u>Yu</u> further

discloses the at least one input unit is a button (fig. 3).

Claim 47: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the device according to claim 37 above, <u>Yu</u> further

discloses the at least one input unit is positioned on the outer border surface which is substantially flush

with the screen (fig. 5, items 22).

Claim 48: Yu discloses a method of controlling a display device having at least one of input unit

positioned on a housing of the display device, the method comprising:

    displaying at least one symbol on a screen, the symbol indicative of a function to control the

display device, the at least one symbol being assigned to the at least one input unit (fig. 3); but does not

explicitly discloses

    detecting a rotated state of the display device;

    changing an orientation of the at least one symbol according to the detection of the rotated state

of the display device; and

    controlling the function of the display device upon actuation of the at least one input unit.

However, Pivot Pro discloses:

    detecting a rotated state of the display device (p. 1, para. [001]);

    changing an orientation of the at least one symbol according to the detection of the rotated state

of the display device (p. 1, para. [001]). Therefore, it would have been obvious to one having ordinary

skill in the art at the time the invention was made to include detector unit in Yu. One would have been

motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a

rotated position.

    However, Kim discloses:

    controlling the function of the display device upon actuation of the at least one input unit (col.6,

lines 10-15). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to include Kim feature in Yu. One would have been motivated to do so in order to

help the user by taking advantage of all the buttons functionality even in a rotated position. But do not

explicitly discloses

    wherein changing an orientation of the at least one symbol further comprises:

displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit.

However, <u>NEC</u> discloses the right orientation of the OSM menu can be toggled between landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include rotating image in <u>Yu</u>. One would have been motivated to do so in order to accommodate the user with different orientation modes and providing the right image display for each alternative mode.

Claim 49: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method as claimed in claim 48 above, <u>Yu</u> further discloses the symbol is a text (fig. 3, item 303).

Claim 50: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method as claimed in claim 48 above, <u>Yu</u> further discloses the symbol is an icon (fig. 3, items 302).

Claim 51: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method as claimed in claim 48 above, <u>Kim</u> further discloses the determining of the rotated state of the display device determines the rotated state of the display device in response to a user rotating the screen of the display device (col. 6, lines 11-15).

Claim 52: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method as claimed in claim 51 above, <u>Kim</u> further discloses the rotated state is either a portrait or a landscape viewing state (fig. 10).

Claim 53: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method as claimed in claim 48 above, <u>Yu</u> further discloses the function includes at least one function to control a display parameter of the display device (fig. 4, items 103 and 301).

Claim 54: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 53 above, Yu further

discloses the function includes one of contrast, brightness, and color control (fig. 4, item 301).

Claim 55: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Yu further

discloses the at least one symbol visually corresponds to at least one input unit(fig. 4, item 302).

Claim 56: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Yu further

discloses the at least one input unit is a button (fig. 3, item 102).

Claim 57: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Yu further

discloses the at least one input unit is positioned on the display device to be flush with the screen (fig. 5,

item 22).

Claim 58: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Yu further

discloses the at least one input unit includes a plurality of input units (fig. 4, items 103 and 301).

Claim 59: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Yu further

discloses the at least one input units are buttons (fig. 4, item 103).

Claim 60: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Kim and Yu

further disclose the at least one input units includes a plurality of input units disposed in one of a vertical

direction and a horizontal direction (fig. 10 and 3) respectively.

Claim 61: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Kim further

discloses the changing of the orientation of the at least one symbol comprises rotating the symbol

substantially 90 degrees (fig. 10).

Claim 62: Yu Pivot Pro Kim and NEC disclose the method as claimed in claim 48 above, Kim further

discloses the respective assignment of the displayed at least one symbol to the at least one input unit

remains the same even though the at least one symbol is rotated (col. 7, lines 51-61).

Claim 63: Yu discloses a method of controlling a display device having at least one of input unit

positioned on a housing of the display device, the method comprising:

     displaying at least one symbol on a screen, the symbol indicative of a function to control the

display device, the at least one symbol being assigned to the at least one input unit (fig. 3); but does not

explicitly disclose

     changing an orientation of the at least one symbol in accordance with a detection of a viewing

state of the screen, in which the viewing state relates to a rotated state of the screen; and

     controlling the function of the display device upon actuation of the at least one input unit.

However, Pivot Pro discloses

     changing an orientation of the at least one symbol in accordance with an information indicative of

a viewing state of the screen, in which the viewing state relates to a rotated state of the screen (p. 1, para.

[001]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to include detector unit in Yu. One would have been motivated to do so in order to

help the user by taking advantage of all the buttons functionality even in a rotated position.

     However, Kim discloses

controlling the function of the display device upon actuation of the at least one input unit (col. 7, lines 58-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include <u>Kim</u> feature in <u>Yu</u>. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position. But do not explicitly disclose

wherein changing an orientation of the at least one symbol further comprises:

displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit.

However, <u>NEC</u> discloses the right orientation of the OSM menu can be toggled between landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include rotating image in <u>Yu</u>. One would have been motivated to do so in order to accommodate the user with different orientation modes and providing the right image display for each alternative mode.

Claim 75: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method of claim 37 above, <u>Yu</u> further discloses wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display parameters of the screen is displayed when the at least one input unit is actuated (fig. 4).

Claim 76: <u>Yu</u> <u>Pivot Pro</u> <u>Kim</u> and <u>NEC</u> disclose the method of claim 37 above, <u>Yu</u> further discloses wherein the at least one input unit is disposed on a front frame of the display apparatus (col. 3, lines 25-30).

Claim 77: The method of claim 48, <u>Yu</u> further discloses wherein at least one of the at least one symbol

and an OSD menu having selectable items to adjust display parameters of the screen is displayed when

the at least one input unit is actuated (fig. 4).

Claim 78: The method of claim 48, <u>Kim</u> further discloses wherein the at least one input unit is disposed

on a front frame of the display apparatus (col. 3, lines 25-30).

Claim 79: The method of claim 63, <u>Yu</u> further discloses wherein at least one of the at least one symbol

and an OSD menu having selectable items to adjust display parameters of the screen is displayed when

the at least one input unit is actuated (fig. 4).

Claim 80: The method of claim 63, <u>Kim</u> further discloses wherein the at least one input unit is disposed

on a front frame of the display apparatus (col. 3, lines 25-30).

19.   Claims 64 and 81-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over <u>Yu</u> (US

6,757,034) in view of <u>Bald</u> et al. (US 6,744,259) and further in view of (NEC LCD Series MultiSync

User's Manual 8/22/1999 hereinafter **NEC**).

Claim 64: <u>Yu</u> discloses a method of controlling a display device having at least one of input unit

positioned on a housing of the display device, the method comprising:

        displaying at least one symbol on a screen, the at least one symbol indicative of a function to

control the display device, the at least one symbol being assigned to the at least one input unit (fig. 3); and

        controlling the function of the display device upon actuation of the at least one input unit (col. 3,

lines 18-25), wherein the at least one symbol visually corresponds to at least one input unit (fig. 3, item

103), the at least one input unit is disposed near the at least one symbol (fig. 3, item 303), but does not explicitly disclose the at least one input unit is disposed so as to be substantially flush with the surface of the screen. However, <u>Bald</u> discloses input buttons that are substantially flush with the unit surface (fig. 1, items 1-4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include <u>Bald</u> feature in <u>Yu</u>. One would have been motivated to do so in order to accommodate the user with different function buttons. But do not explicitly disclose

changing an orientation of the at least one symbol in accordance with a detection of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen.

However, <u>Pivot Pro</u> discloses

changing an orientation of the at least one symbol in accordance with an information indicative of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen (p. 1, para. [001]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include detector unit in <u>Yu</u>. One would have been motivated to do so in order to help the user by taking advantage of all the buttons functionality even in a rotated position. But do not explicitly disclose

wherein changing an orientation of the at least one symbol further comprises:

displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit.

However, <u>NEC</u> discloses the right orientation of the OSM menu can be toggled between landscape and portrait (p. 6, para. 3) [the menu will be displayed according to the button position]. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include rotating image in <u>Yu</u>. One would have been motivated to do so in order to accommodate the user with different orientation modes and providing the right image display for each alternative mode.

Claim 81: Yu, Bald, Pivot Pro and NEC disclose the method of claim 64 above, Yu further discloses

wherein at least one of the at least one symbol and an OSD menu having selectable items to adjust display

parameters of the screen is displayed when the at least one input unit is actuated (fig. 4).

Claim 82: Yu, Bald, Pivot Pro and NEC disclose the method of claim 64 above, Bald further discloses

wherein the at least one input unit is disposed on a front frame of the display apparatus (fig. 1).

(10) Response to Argument

The arguments, in the order presented by the appellant, will be addressed by the

examiner.

Argument)

Yu, Badger, and NEC, whether taken alone or in combination with one another, fail to teach or

suggest, among other things, "detecting a pivot angle of the image display apparatus, and displaying the

image rotated according to the pivot angle at a position close to the buttons".

Response:

Examiner submits that Badger discloses *computer display 216 can include a sensor*

which determines the current physical orientation and signals operating system 206 to change

the orientation mode to compensate for the rotation (col. 5, lines 26-31) and NEC discloses *the*

correct orientation of the OnScreen Menu can be toggle between portrait and landscape (p. 6

and fig. R.1). Not only NEC can detect a pivot angle but also display the OSM menu based on

the orientation in accordance with the function buttons on the chassis. As clearly shown, Yu

discloses a monitor with function buttons on the side (fig. 4); but if the user rotates the monitor

from landscape to portrait the on-screen menu will have a different orientation as compared to

the original landscape display. While applying NEC feature of correct orientation of the

OnScreen Menu display of toggling between portrait and landscape, the deficiencies of Yu where

the onscreen menu is displayed opposite to the function button will be cured and the function

buttons on the monitor chassis will be able to operate the OSM menu by applying the proper

orientation. Therefore, the combination of NEC and Yu is plausible.

Argument)

     Bald fails to teach or suggest, anywhere that the display screen 20 has "zones" or that it

displays "image information" in the "zones".

     Kim, Bald, and NEC, fail to teach or suggest, among other things, "the image display unit

has zones to display an image indicating functions assigned to the buttons, and the controller

generates image information to be displayed in the zones and supplies the image information to

the graphics processing unit.

     Kim, Bald, and NEC, fail to teach or suggest, among other things, "that the graphics

processing unit displays the image in the zones rotated according to the pivot angle at a position

close to the buttons"

Response:

     Examiner submits that Bald shows that the front panel of fig. 1 includes four soft keys 1-

4 with their corresponding function description either text or images (cursor control keys, "enter"

or "input" key and /or "exit" key. As per Bald teaching, the right side of display 20 shows text

and image with associated buttons where pressing any of those buttons will execute the relevant functions. <u>Bald</u> further discloses *the method of the invention begins upon power-up of the safety compliance instrument (step 60), at which time a verification menu 30 shown in FIG. 3 is displayed (step 61). This menu permits the user to select from among four types of tests to be verified using up and down cursor control arrows activated by softkeys 1 and 2, a select key activated by softkey 3, and an exit key activated by softkey 4. Use of such a scrolling display permits selection from among a greater number of options than there are softkeys* (col. 5, lines 36-44). Upon power-up, there's a controller that verifies the images or text for the displayed menu and the system determine the exact display area of the function labels next to the soft keys that are part of the display chassis.

<u>NEC</u> discloses *the correct orientation of the OnScreen Menu can be toggle between portrait and landscape* (p. 6, para. 3 and fig. R.1). Not only NEC can detect a pivot angle but also display the OSM menu based on the orientation in accordance with the function buttons on the chassis. While applying <u>NEC</u> feature of correct orientation of the OnScreen Menu display of toggling between portrait and landscape, the deficiencies of <u>Kim</u> where the onscreen menu is displayed opposite to the function button will be cured and the function buttons on the monitor chassis will be able to operate the OSM menu by applying the proper orientation. Therefore, the combination of <u>NEC</u> and <u>Kim</u> is plausible.

Argument)

Bald fails to teach or suggest anywhere that the display screen 20 has "zones" or that it

displays an "image in the zones" that is "rotated according to the pivot angle" at a position close

to the buttons."

Bald, Kim, and NEC, whether taken alone or in combination with one another, fail to

teach or suggest, among other things, "an image display unit including zones to display an image

indicating functions assigned to the buttons" and where the "image display unit displays the

image in the zones rotated according to the pivot angle at a position close to the buttons" as

recited in claim 19.

Response:

Examiner submits that Bald shows that the front panel of **fig. 1** includes four soft keys 1-

4 with their corresponding function description either text or images (cursor control keys, "enter"

or "input" key and /or "exit" key. As per Bald teaching, the right side of display 20 shows text

and image with associated buttons where pressing any of those buttons will execute the relevant

functions. Bald further discloses *the method of the invention begins upon power-up of the safety*

compliance instrument (step 60), at which time a verification menu 30 shown in FIG. 3 is

displayed (step 61). This menu permits the user to select from among four types of tests to be

verified using up and down cursor control arrows activated by softkeys 1 and 2, a select key

activated by softkey 3, and an exit key activated by softkey 4. Use of such a scrolling display

permits selection from among a greater number of options than there are softkeys (col. 5, lines

36-44). Upon power-up, there's a controller that verifies the images or text for the displayed

menu and the system determine the exact display area of the function labels next to the soft keys

that are part of the display chassis.

NEC discloses *the correct orientation of the OnScreen Menu can be toggle between*

portrait and landscape (p. 6, para. 3 and fig. R.1). Not only NEC can detect a pivot angle but

also display the OSM menu based on the orientation in accordance with the function buttons on

the chassis. While applying NEC feature of correct orientation of the OnScreen Menu display of

toggling between portrait and landscape, the deficiencies of Bald, where the onscreen menu is

displayed opposite to the function button in case of a different orientation, will be cured and the

function buttons on the monitor chassis will be able to operate the OSM menu by applying the

proper orientation. Therefore, the combination of NEC and Bald is plausible.

Argument)

Yu fails to teach or suggest "generating sub-functions of at least one of the first and

second buttons according to the generated first and second function" as recited in claim 27.

Response:

Examiner submits that Yu discloses in *FIG. 4 shows the flat panel display 10 when the*

user has selected contrast of the display screen 300 for adjustment. An adjustment bar 304

appears in the main menu 301. A length of the darkened position of the adjustment bar 304

indicates a degree of contrast. Guided by the indicating symbols 302, the user can press the

adjusting buttons 104, 105 to adjust contrast (step 409). When the adjusting button 104 is

pressed, the adjustment bar 304 extends rightward, and the contrast is progressively increased.

When the adjusting button 105 is pressed, the darkened position of the adjustment bar 304

recedes leftward, and the contrast is progressively decreased. When the user is satisfied with the

adjustment made, the user can press the first function button 103 to confirm the adjustment made

(step 410) (col. 3, lines 48-61). The user originally presses the first function button 103 in order

to select contrast function from the menu bar 302 and submenu functions 301 is displayed as a

result of that selection. Menu bar 301 represents a second layer of menus or submenus that

directly derive from the actuation of menu bar 302 that is vertically displayed

Argument)

Bald, Yu, Kim, and NEC, whether taken alone or in combination with one another, fail to

teach or suggest, among other things, that "the image display unit displays the image rotated

according to the pivot angle at a position close to the at least one button" as recited in claim 35.

Response:

NEC discloses *the correct orientation of the OnScreen Menu can be toggle between*

portrait and landscape (p. 6 and fig. R.1). Not only NEC can detect a pivot angle but also

display the OSM menu based on the orientation in accordance with the function buttons on the

chassis. While applying NEC feature of correct orientation of the OnScreen Menu display of

toggling between portrait and landscape, the deficiencies of Bald, where the onscreen menu is

displayed opposite to the function button in case of a different orientation, will be cured and the

function buttons on the monitor chassis will be able to operate the OSM menu by applying the

proper orientation. Therefore, the combination of NEC and Bald is plausible.

Argument)

Pivot Pro, Kim, and NEC, whether taken alone or in combination with one another, fail to

teach or disclose, among other things, "a detector unit to detect whether the device is in a portrait

mode or in a landscape mode" and "at least one symbol is displayed which is respectively

assigned to the at least one input unit, and wherein the orientation of the at least one symbol is

changed in accordance with the result of the detector unit, and the at least one symbol, whose

orientation is changed, is displayed at a position close to the at least one input unit" as recited in

claim 37.

Response:

Examiner submits Pivot Pro *lets you rotate your computer display from landscape to*

portrait position, making documents, e-mail and web browsing easier to manage (page 1, para

1). By rotating the computer display implies that the software detects a change in the orientation

and automatically reconfigures the display area where icons and task bars on the window will be

displayed so that text and others are legible to the user.

NEC discloses *the correct orientation of the OnScreen Menu can be toggle between portrait and*

landscape (p. 6 and fig. R.1). Not only NEC can detect a pivot angle but also display the OSM

menu based on the orientation in accordance with the function buttons on the chassis. As clearly

shown, Yu discloses a monitor with function buttons on the side (fig. 4); but if the user rotates

the monitor from landscape to portrait the on-screen menu will have a different orientation as

compared to the original landscape display. While applying NEC feature of correct orientation of

the OnScreen Menu display of toggling between portrait and landscape, the deficiencies of Yu

where the onscreen menu is displayed opposite to the function button will be cured and the

function buttons on the monitor chassis will be able to operate the OSM menu by applying the

proper orientation. Therefore, the combination of NEC and Yu is plausible.

Argument)

Pivot Pro, and NEC, whether taken alone or in combination with one another, fail to

teach or suggest, among other things, "detecting a rotated state of the display device" and

"changing an orientation of the at least one symbol" includes "displaying the at least one symbol,

whose orientation is changed, at a position close to the at least one input unit" as recited in claim

48.

Response:

Examiner submits Pivot Pro *lets you rotate your computer display from landscape to*

portrait position, making documents, e-mail and web browsing easier to manage (page 1, para

1). By rotating the computer display implies that the software detects a change in the orientation

and automatically reconfigures the display area where icons and task bars on the window will be

displayed so that text and others are legible to the user.

NEC discloses *the correct orientation of the OnScreen Menu can be toggle between portrait and*

landscape (p. 6 and fig. R.1). Not only NEC can detect a pivot angle but also display the OSM

menu based on the orientation in accordance with the function buttons on the chassis. As clearly

shown, Yu discloses a monitor with function buttons on the side (fig. 4); but if the user rotates

the monitor from landscape to portrait the on-screen menu will have a different orientation as compared to the original landscape display. While applying NEC feature of correct orientation of the OnScreen Menu display of toggling between portrait and landscape, the deficiencies of Yu where the onscreen menu is displayed opposite to the function button will be cured and the function buttons on the monitor chassis will be able to operate the OSM menu by applying the proper orientation. Therefore, the combination of NEC and Yu is plausible.

Argument)

Pivot Pro, Kim, and NEC, whether taken alone or in combination with one another, fail to teach or suggest, among other things, "changing an orientation of the at least one symbol in accordance with a detection of a viewing state of the screen, in which the viewing state relates to a rotated state of the screen," and "displaying the at least one symbol, whose orientation is changed, at a position close to the at least one input unit" as recited in claim 63.

Response:

Examiner submits Pivot Pro *lets you rotate your computer display from landscape to portrait position, making documents, e-mail and web browsing easier to manage* (page 1, para 1). By rotating the computer display implies that the software detects a change in the orientation and automatically reconfigures the display area where icons and task bars on the window will be displayed so that text and others are legible to the user.

NEC discloses *the correct orientation of the OnScreen Menu can be toggle between portrait and landscape* (p. 6 and fig. R.1). Not only NEC can detect a pivot angle but also display the OSM

menu based on the orientation in accordance with the function buttons on the chassis. As clearly

shown, Yu discloses a monitor with function buttons on the side (fig. 4); but if the user rotates

the monitor from landscape to portrait the on-screen menu will have a different orientation as

compared to the original landscape display. While applying NEC feature of correct orientation of

the OnScreen Menu display of toggling between portrait and landscape, the deficiencies of Yu

where the onscreen menu is displayed opposite to the function button will be cured and the

function buttons on the monitor chassis will be able to operate the OSM menu by applying the

proper orientation. Therefore, the combination of NEC and Yu is plausible.

Argument)

     Yu, and NEC, whether taken alone or in combination with one another, do not teach or

suggest, among other things, "displaying the at least one symbol, whose orientation is changed,

at a position close to the at least one input unit" as recited in claim 64.

Response:

     NEC discloses *the correct orientation of the OnScreen Menu can be toggle between*

portrait and landscape (p. 6 and fig. R.1). Not only NEC can detect a pivot angle but also

display the OSM menu based on the orientation in accordance with the function buttons on the

chassis. As clearly shown, Yu discloses a monitor with function buttons on the side (fig. 4); but

if the user rotates the monitor from landscape to portrait the on-screen menu will have a different

orientation as compared to the original landscape display. While applying NEC feature of correct

orientation of the OnScreen Menu display of toggling between portrait and landscape, the

deficiencies of <u>Yu</u> where the onscreen menu is displayed opposite to the function button will be

cured and the function buttons on the monitor chassis will be able to operate the OSM menu by

applying the proper orientation. Therefore, the combination of <u>NEC</u> and <u>Yu</u> is plausible.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related

Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Phenuel S. Salomon/

Phenuel S. Salomon
Patent Examiner
Art Unit 2179

Conferee:

/Ba Huynh/

Primary Examiner, Art Unit 2179

/Weilun Lo/

Supervisory Patent Examiner, Art Unit 2179